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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,086	06/25/2003	Yoshiyuki Kaku	9475/0M771US0	5380
7278	7590	12/07/2005	EXAMINER	
DARBY & DARBY P.C. P. O. BOX 5257 NEW YORK, NY 10150-5257			VAN, LUAN V	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/607,086

Applicant(s)

KAKU ET AL.

Examiner

Luan V. Van

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-7,9,10 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9,10 and 12-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendment of October 24, 2005 does not render the application allowable.

### ***Status of Objections and Rejections***

The rejection of claims 3, 8 and 11 is obviated by Applicant's cancellation.

The rejection of claims 1 and 3 under 35 U.S.C. 102(a) as being anticipated by Kubota et al. is withdrawn in view of Applicant's amendment.

The rejection of claims 4-6 and 8 under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. is withdrawn in view of Applicant's amendment.

The rejection of claims 1-11 under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. in view of Mukouda is withdrawn in view of Applicant's amendment.

All other rejections from the previous office action are maintained.

New rejections under 35 U.S.C. 103(a) are necessitated by the amendments.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 4-7, 9, 10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al.

Regarding claims 1, 4 and 9, Tanaka et al. teach a method for manufacturing a ferrule comprising the steps of: immersing a negative electrode line (figure 4, wire 9) and a positive electrode (figure 2, anode 4) in an electroforming fluid in an electroforming bath; disposing at least one dummy line (figure 4, any of wire 9 can be a dummy line) in the vicinity of the negative electrode line; depositing metal on the negative electrode line by electroforming to form a cylindrical electroformed element (column 8 lines 45-62) in such a manner that the negative electrode line and the dummy line are integrally embedded in the electroformed element; taking out at least the dummy line (column 10 lines 29-53) from the electroformed element to form a through hole for inserting an optic fiber; and taking out the positioning line (column 10 lines 29-53) from the electroformed element to form a positioning hole used for adjusting a position of the electroformed element (figures 6, 15B, 17 and 20) when an outside

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shape thereof is machined (column 11 lines 31-47), thereby to obtain the ferrule made of the electroformed element. In addition, Tanaka et al. teach that ferrules having more than two cores can be made (see Sixth embodiment); therefore, the additional core wires can be used as positioning lines--as well as dummy lines--which form positioning holes when the additional core wires are extracted.

The difference between the reference and the instant claim is that the reference does not explicitly teach a line having electrical insulating material on the outer surface wherein said insulating material is integrally embedded in the electroformed element.

However, Tanaka et al. teach that plastic wires made of nylon, polyester, or Teflon (column 9 lines 52-56) can be used. Plastic wires inherently have an electrically insulating material on the outer surface. Tanaka et al. further teach that "it is necessary to apply electroless plating based on, for example, nickel or silver, in order to give conductivity to the surface. It is advantageous to use conductive plastic. In this case, when the electric power is applied to the conductive plastic to heat it after the electroforming, the extracting mold release is easily performed for the electroformed product" (column 9 lines 52-63).

The teaching of Tanaka et al. suggest that it is necessary to apply an electroless plating on the wire in order to form a conductive plastic wire. This method is desirable or advantageous because it facilitates the extraction of the plastic wire. Therefore, it

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would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tanaka et al. by omitting the electroless plating, since omission of an element and its function is obvious if the function of the element is not desired (MPEP 2144.04).

Regarding claims 2, 7 and 10, Tanaka et al. teach the method of subjecting the wire member to a mold release treatment prior to electroforming (column 12 lines 56-63). The mold release treatment would form an electrical insulating material on the wire.

Regarding claims 5 and 6, Tanaka et al. teach the ferrule is used as a socket (figures 15B and 20, ferrules 110 and 150, respectively); and an optical fiber fixedly attached to the positioning hole of a second ferrule is inserted into the positioning hole of the ferrule. The difference between the reference and the instant claim is that the reference does not explicitly teach attaching a plug pin. However, the optical fiber 40a in figure 20 is functionally equivalent to a plug pin. Tanaka et al. further teach that the optical fiber connector, which can be integrally made as part of the ferrule (column 18 lines 29-30), may function as a plug or a jack, comprising of a sleeve for aligning two ferrules (column 5 lines 17-24).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the multiple-core type ferrule of Tanaka et al. by replacing

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an optical fiber with a plug pin, because Tanaka et al. teach that the ferrule may be used as a plug, and because it is within the ability of one having ordinary skill in the art.

Regarding claims 12-14, Tanaka et al. teach the wire can be made of iron, aluminum, copper or alloy thereof (column 9 lines 52-56). Metal wires inherently have a metal deposited around them.

### ***Response to Arguments***

Applicant's arguments filed October 24, 2005 have been fully considered but they are not persuasive.

In the arguments presented on pages 7-8 of the amendment, the Applicant suggests that the reference to Tanaka does not disclose every limitation of the rejected claims, specifically the amended limitation of a dummy line having electrical insulating material on the outer surface wherein said insulating material is integrally embedded in the electroformed element. The Applicant further contends that Tanaka discloses in the case of lines formed of insulative material that "it is necessary to apply electroless plating based on, for example nickel or silver, in order to give conductivity to the surface." (Tanaka, column 9, lines 57-59 and Fig. 7.)

However, as stated above, Tanaka et al. teach that plastic wires made of nylon, polyester, or Teflon (column 9 lines 52-56) can be used. Plastic wires inherently have an electrically insulating material on the outer surface. Tanaka et al. further states that "It is advantageous to use conductive plastic. In this case, when the electric power is applied to the conductive plastic to heat it after the electroforming, the extracting mold release is easily performed for the electroformed product" (column 9 lines 52-63).

The teachings of Tanaka et al. suggest that it is necessary to apply an electroless plating on the wire in order to form a conductive plastic wire. This method is desirable or advantageous because it facilitates the extraction of the plastic wire. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Tanaka et al. by omitting the electroless plating, since omission of an element and its function is obvious if the function of the element is not desired (MPEP 2144.04).

Furthermore, Tanaka et al. teach a method of subjecting the wire member to a mold release treatment prior to electroforming (column 12 lines 56-63) in order to facilitate the extraction of the plastic wire. The mold release treatment would form an electrical insulating material on the wire. This would read on the limitation of a dummy line having electrical insulating material on the outer surface wherein said insulating material is integrally embedded in the electroformed element.



***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

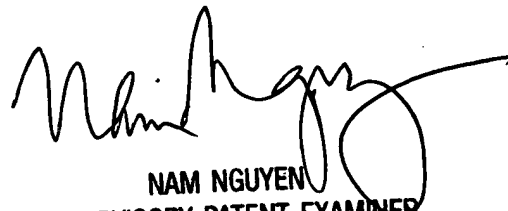
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan V. Van whose telephone number is 571-272-8521. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LWV  
12/2/2005



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